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10/692,670	10/24/2003	Naveen Bali	5693P031	9973

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EXAMINER	
LAI, MICHAEL C	

ART UNIT	PAPER NUMBER
2457	

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04/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,670	BALI, NAVEEN	
	Examiner	Art Unit	
	MICHAEL C. LAI	2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 21-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,21-32* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to communication filed on 1/16/2009.

   Claims 1-7 and 21-32 have been examined.

Response to Amendment

2. The examiner has acknowledged the amended claims 1, 4, 21-23, and 27-29. Claims 1-7 and 21-32 are pending. The objection to the specification has been overcome and withdrawn accordingly. The 112 rejections to claims 1 and 4 have also been overcome and withdrawn accordingly.

Response to Arguments

3. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

   Claim 1 recites the limitation "configuring each FC node device in the communications system to resolve the backup address into an address of the first FC node device based on the FC protocol" in lines 9-11. However, claim 1 also recites the limitations that the first FC node device is assigned a plurality of upper-level addresses in lines 2-8. It is unclear which address (primary or

backup, or others) of the first FC node device is used to resolve the backup address. Also, since only the first FC node device has a backup address in the claim, it is unclear what exactly the limitation "resolve the backup address into an address of the first FC node device" means for other FC node devices.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessire (US 7,055,056 B2, hereinafter Bessire), and in view of Cranor et al. (US 2003/0093523 A1, hereinafter Cranor).

Regarding claim 1, Bessire discloses a method, comprising:

assigning a plurality of upper-level addresses based on an upper-level protocol to a first Fibre Channel (FC) node device in a communications system, the first FC node device supporting the FC protocol at a base layer, wherein assigning the plurality of upper-level addresses includes a primary address and a backup address, wherein the backup address is associated with a second FC node device [FIG. 3, steps 82-86, and col. 5 line 61 through col.6 line 12, "each controller is configured to take over the role of the other if it has failed. To this end, one controller is automatically assigned as the primary controller and the other is assigned as the secondary controller. At

step 84, each controller automatically requests the IP address of the other and stores the address in NVRAM, at step 86. For example, controller 30 requests the IP address of controller 32 and stores the address in NVRAM 38. In an alternate embodiment, however, each controller may be manually assigned two IP addresses, one being its primary IP address and the other being a second IP address assigned to the other controller"]; and

in response to detecting a link failure of the second FC node device, configuring each FC node device in the communications system to resolve the backup address into an address of the first FC node device based on the FC protocol [FIG. 5, steps 206-210, and col. 6, lines 50-67, "controller 32 already possesses two IP addresses, one being its own IP address and the other being the IP address for controller 30. Consequently, controller 32 is capable of receiving and processing the I/O request of controller 30"].

Bessire discloses the claimed invention except for encoding the plurality of upper-level address within a symbolic name of the first FC node device. Cranor teaches encoding the client's network address in the domain name [para. 0021, 0024-0025]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Cranor's teaching into Bessire's method for the purpose of identifying FC node device addresses encoded in the symbolic name [para. 0007] by encoding the plurality of upper-

level address within a symbolic name of the FC node device, thereby providing fail over/fail back capabilities among FC node devices.

Regarding claim 2, Bessire further discloses wherein the upper-level protocol is a network protocol [col. 5, lines 13-34, TCP/IP].

Regarding claim 3, Bessire further discloses wherein the network protocol is the Transmission Control Protocol over the Internet Protocol (TCP/IP), and the upper-level addresses are IP addresses [col. 5, lines 13-34, TCP/IP; col. 5 line 61 through col.6 line 12, IP address82].

Regarding claim 4, Cranor further discloses wherein encoding the plurality of upper-level addresses within the symbolic name of the first FC node device based on a predefined encoding scheme [para. 0021, HTTP, IP]. See claim 1 motivation.

Regarding claim 5, Cranor further discloses wherein the predefined encoding scheme includes using selected bytes the symbolic name field defined in the FC protocol to store the plurality of upper-level addresses [para. 0021]. See claim 1 motivation.

Regarding claim 6, Bessire further discloses wherein configuring each FC node device comprises configuring the FC node device to send a RFT_ID message to a name server for a FC fabric that enables communications between the FC node devices, and to send a RSPN_ID message to the name server [col. 4 line 67 through col. 5 line 39, “the controllers 30, 32 are powered and

communication is established between controllers 30, 32 using an implementation of IPC"].

8. Claims 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latif et al. (US 2003/0091037 A1, hereinafter Latif), in view of Bessire (US 7,055,056 B2, hereinafter Bessire).

Regarding claim 21, Latif discloses a storage device [115 or 120 FIG. 3], comprising:

a processor [FIG. 5];

a memory coupled to the processor, the memory storing instructions which when executed by the processor cause the storage device to perform a method comprising:

receiving input of an IP addresses to be associated with a first Fibre Channel (FC) N_Port of the storage device [FIG. 11 and para. 0034, "ULP"; para. 0065, "Each switch 235 assigns an IP address, SoIP socket number and Fibre Channel address to each Fibre Channel device when the device performs a fabric login."]; and

storing the IP address as a symbolic name within a symbolic name field for the first FC N_Port [FIG. 12B, C and D, columns 1 and 2; para. 0073].

Latif teach substantially all the limitation in claim 21, but fails to disclose specifically about a plurality of IP addresses includes a primary address and a backup IP address associated with a second FC N_Port. However, Bessire

teaches assigning two IP addresses, one being its primary IP address and the other being a backup IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's device for the purpose of allowing FC N_Ports to be clustered by assigning backup IP addresses, thereby providing fail over/fail back capabilities among FC N_Ports.

Regarding claim 22, Latif further discloses wherein the method further comprises performing a registration procedure to register the symbolic name, and each communications protocol supported by the first FC N_Port with a name server for the FC fabric to which the first FC N_Port is connected [para. 0095, "SoIP Name Server"].

Regarding claim 23, Latif teaches substantially all the limitation in claim 22, but fails to disclose specifically about the registration procedure comprises a first registration operation to register the primary IP address, and a second registration operation to register the backup IP address. However, Bessire teaches assigning two IP addresses, one being its primary IP address and the other being a second IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's device for the purpose of allowing N_Ports to be clustered by assigning backup IP addresses, thereby providing fail over/fail back capabilities among N_Ports.

Regarding claim 24, Bessire further teaches wherein the first registration operation and the second registration operation are the same registration operation [col. 6, lines 3-6]. See motivation in claim 23.

Regarding claim 25, Bessire further teaches wherein the method further comprises detecting a failure of a primary link between a pair of remote N_Ports, wherein one of the remote N_Ports has the backup IP address as a primary IP address [col. 5 line 61 through col. 6 line 12]. See motivation in claim 23.

Regarding claim 26, Latif teaches substantially all the limitation in claim 25, but fail to disclose specifically about wherein the second registration operation is performed after detecting the failure. However, Bessire teaches assigning two IP addresses, one being its primary IP address and the other being a second IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's device for the purpose of allowing N_Ports to be clustered by assigning backup IP addresses after detecting the failure, thereby providing fail over/fail back capabilities among N_Ports.

Regarding claim 27, Latif discloses a computer readable storage medium, having stored thereon on a sequence of instructions which when executed by a processor for a storage device [115 or 120 FIG. 3], causes the storage device to perform a method comprising:

receiving input of an IP addresses to be associated with a first Fibre Channel (FC) N_Port of the storage device [FIG. 11 and para. 0034, "ULP";

para. 0065, "Each switch 235 assigns an IP address, SoIP socket number and Fibre Channel address to each Fibre Channel device when the device performs a fabric login."]; and

storing the IP address as a symbolic name within a symbolic name field for the FC N_Port [FIG. 12B, C and D, columns 1 and 2; para. 0073].

Latif teaches substantially all the limitation in claim 27, but fails to disclose specifically about a plurality of IP addresses includes a primary address and a backup IP address associated with a second FC N Port. However, Bessire teaches assigning two IP addresses, one being its primary IP address and the other being a backup IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's method for the purpose of allowing FC N_Ports to be clustered by assigning backup IP addresses, thereby providing fail over/fail back capabilities among FC N_Ports.

Regarding claim 28, Latif further discloses wherein the method further comprises performing a registration procedure in which the plurality of IP addresses and communications protocols supported by the first FC N_Port is registered with a name server for a FC fabric to which the first FC N_Port is connected [para. 0095, "SoIP Name Server"].

Regarding claim 29, Latif teaches substantially all the limitation in claim 27, but fails to disclose specifically about wherein the registration procedure

comprises a first registration operation to register the primary IP address and a second registration operation to register the backup IP address. However, Bessire teaches assigning two IP addresses, one being its primary IP address and the other being a second IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's device for the purpose of allowing N_Ports to be clustered by assigning backup IP addresses, thereby providing fail over/fail back capabilities among N_Ports.

Regarding claim 30, Bessire further teaches wherein the first registration operation and the second registration operation are the same registration operation [col. 6, lines 3-6]. See motivation in claim 29.

Regarding claim 31, Bessire further teaches wherein the method further comprises detecting a failure of a primary link between a pair of remote N_Ports, wherein one of the remote N_Ports has the backup IP address as a primary IP address [col. 5 line 61 through col. 6 line 12]. See motivation in claim 29.

Regarding claim 32, Latif teaches substantially all the limitation in claim 31, but fail to disclose specifically about wherein the second registration operation is performed after detecting the failure. However, Bessire teaches assigning two IP addresses, one being its primary IP address and the other being a second IP address to each controller [col. 6, lines 3-6]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Bessire's teaching into Latif's device for the purpose of allowing

N_Ports to be clustered by assigning backup IP addresses after detecting the failure, thereby providing fail over/fail back capabilities among N_Ports.

Allowable Subject Matter

9. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Lai whose telephone number is (571) 270-3236. The examiner can normally be reached on M-F 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael C. Lai
16APR2009

/YVES DALENCOURT/
Primary Examiner, Art Unit 2457